

**EPA Superfund
Record of Decision:**

**SUMMIT NATIONAL
EPA ID: OHD980609994
OU 01
DEERFIELD TOWNSHIP, OH
11/02/1990**

1. EXPANDING SITE BOUNDARIES TO INCLUDE CONTAMINATED AREAS ALONG THE PERIMETERS AND THE SOUTH DRAINAGE DITCH AND CONSTRUCTING AN 8-FOOT CHAIN LINK FENCE AROUND THIS EXPANDED BOUNDARY.

2. EXCAVATING AND INCINERATING (IN AN ON-SITE FACILITY) SOILS AND SEDIMENTS AS FOLLOWS:

CONTAMINATED SOILS ON-SITE:	24,000 C.Y.
CONTAMINATED PERIMETER SEDIMENTS:	4,000 C.Y.
(INCLUDING DRAINAGE DITCHES)	
CONTENTS OF BURIED DRUMS	900-1600 DRUMS

3. DISMANTLING AND/OR DEMOLISHING ALL ON-SITE STRUCTURES FOR ON-SITE DISPOSAL.

4. COLLECTING AND TREATING SURFACE WATER FROM TWO ON-SITE PONDS AND DRAINAGE DITCHES. SEDIMENTS WOULD BE EXCAVATED AFTER PONDS AND DITCHES ARE DEWATERED.

5. EXTRACTING GROUNDWATER FOR TREATMENT FROM THE VARIOUS LEVELS OF THE WATER TABLE ON-SITE BY TWO BASIC COMPONENTS:

A. A PIPE AND MEDIA DRAIN SYSTEM ALONG THE SOUTHERN BOUNDARY AND LOWER PORTIONS OF THE EASTERN AND WESTERN BOUNDARIES RATHER THAN A SYSTEM OF WELLS TO EXTRACT AND TREAT CONTAMINATED GROUNDWATER.

B. ADDITIONAL EXTRACTION WELLS INSTALLED IN THE INTERMEDIATE UNIT TO AUGMENT THE PIPE AND MEDIA DRAIN SYSTEM. ALL WATER EXTRACTED WILL BE TREATED WITH AN ON-SITE TREATMENT SYSTEM.

6. RELOCATING ONE VACANT RESIDENCE.

7. INCINERATED WASTE MATERIAL WILL BE TESTED TO ENSURE IT CONFORMS WITH US EPA AND OHIO EPA STANDARDS AND USED AS FILL TO REGRADE THE SITE BEFORE THE FINAL COVER IS PLACED OVER THE SURFACE. IF IT FAILS THE TESTS THE WASTE WILL BE PLACED IN AN ON-SITE RCRA LANDFILL.

8. REGRADING SITE AND INSTALLING A SOIL COVER OVER APPROXIMATELY 10.6 ACRES OF SITE. THIS COVER WILL CONSIST OF AN 18-INCH LAYER OF LOAM AND 6 INCHES OF TOPSOIL WITH GAS VENTS INSTALLED FOR TREATING AND MONITORING POTENTIAL AIR EMISSIONS.

9. REROUTING SOUTHERN AND EASTERN DRAINAGE DITCHES TO AN UNCONTAMINATED AREA BEYOND THE SITE.

10. THE TOTAL COST OF THE REMEDIAL ACTION DEFINED IN THE 1990 PROPOSAL IS \$34.4 MILLION.

DECLARATION

THE SELECTED REMEDY IS PROTECTIVE OF HUMAN HEALTH AND THE ENVIRONMENT, ATTAINS FEDERAL AND STATE REQUIREMENTS THAT ARE APPLICABLE OR RELEVANT AND APPROPRIATE FOR THIS REMEDIAL ACTION, AND IS COST-EFFECTIVE. THIS REMEDY SATISFIES THE STATUTORY PREFERENCE FOR REMEDIES THAT EMPLOY TREATMENT THAT REDUCES TOXICITY, MOBILITY, OR VOLUME AS A PRINCIPAL ELEMENT AND UTILIZES PERMANENT SOLUTIONS AND ALTERNATIVE TREATMENT TECHNOLOGIES TO THE MAXIMUM EXTENT PRACTICABLE.

BECAUSE THIS REMEDY WILL RESULT IN HAZARDOUS SUBSTANCES REMAINING ON-SITE ABOVE HEALTH-BASED LEVELS, A REVIEW WILL BE CONDUCTED WITHIN FIVE YEARS AFTER COMMENCEMENT OF REMEDIAL ACTION TO ENSURE THAT THE REMEDY CONTINUES TO PROVIDE ADEQUATE PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT.

VALDAS V. ADAMKUS
REGIONAL ADMINISTRATOR
SUMMIT NATIONAL SITE
DEERFIELD, OHIO

DATE: 11/02/1991

#SHB

SITE HISTORY AND BACKGROUND

THE SUMMIT NATIONAL SITE, A FORMER LIQUID WASTE DISPOSAL FACILITY, IS LOCATED ON AN ABANDONED COAL STRIP MINE AT THE INTERSECTION OF OHIO ROUTE 225 AND US ROUTE 224 IN DEERFIELD, OHIO; 20 MILES WEST OF YOUNGSTOWN, AND 45 MILES SOUTHEAST OF CLEVELAND. THE 11.5 ACRE FENCED SITE CONTAINS TWO PONDS, AN INACTIVE INCINERATOR, AND SEVERAL VACANT BUILDINGS. IMMEDIATELY SURROUNDING THE SITE ARE SEVERAL RURAL RESIDENCES, TWO LANDFILLS, LIGHT INDUSTRIES AND FARMLAND.

FROM 1973 TO 1978, SUMMIT NATIONAL ACCEPTED LIQUID WASTES INCLUDING OIL, RESINS, SLUDGE, PESTICIDE WASTES AND PLATING WASTES IN DRUMS AND TANK TRUCKS. THESE WASTES WERE STORED, INCINERATED, BURIED OR DUMPED AT THE SITE. IN JUNE OF 1978, OHIO EPA ORDERED SUMMIT NATIONAL TO STOP RECEIVING WASTE AND TO REMOVE ALL LIQUID WASTE STORED AT THE SITE, AND IN 1979 FILED A COMPLAINT AGAINST THE OPERATORS FOR FAILING TO COMPLY WITH STATE REGULATIONS REGARDING THE HANDLING OF SOLID AND LIQUID WASTES.

OHIO'S SAMPLING OF ON-SITE SOILS AND SURFACE WATER INDICATED THE PRESENCE OF HAZARDOUS SUBSTANCES POTENTIALLY HARMFUL TO PUBLIC HEALTH AND THE ENVIRONMENT. IN 1980, OHIO EPA CONSTRUCTED A FENCE AROUND THE SITE, INSTALLED A DRAINAGE SYSTEM TO CONTROL SURFACE WATER FLOW ONTO AND OFF THE SITE AND SIX GROUND WATER MONITORING WELLS. THE SAME YEAR, UNDER AUTHORITY GRANTED IN SECTION 311 OF THE CLEAN WATER ACT, US EPA REMOVED THREE LIQUID STORAGE TANKS AND THEIR CONTENTS AND SOME CONTAMINATED SURFACE SOILS FROM THE SITE. IN 1981, AN AGREEMENT BETWEEN OHIO AND EIGHT OF THE POTENTIALLY RESPONSIBLE PARTIES RESULTED IN A \$2.5 MILLION SURFACE CLEANUP WHICH REMOVED DRUMS, TANKS, SURFACE DEBRIS AND A SMALL AMOUNT OF CONTAMINATED SOIL FROM THE SITE. IN 1983, US EPA PLACED THE SITE ON THE NATIONAL PRIORITIES LIST, A FEDERAL ROSTER OF THE NATION'S UNCONTROLLED OR ABANDONED HAZARDOUS WASTE SITES ELIGIBLE FOR CLEANUP UNDER THE SUPERFUND PROGRAM. FROM 1984 THROUGH 1987, US EPA CONDUCTED A REMEDIAL INVESTIGATION (A NUMBER OF SCIENTIFIC STUDIES CONDUCTED TO DETERMINE THE NATURE AND EXTENT OF CONTAMINATION PROBLEMS) AND A FEASIBILITY STUDY (AN EVALUATION OF REMEDIAL ALTERNATIVES) TO DEFINE AND EVALUATE THE ALTERNATIVES FOR ADDRESSING THE EXISTING CONTAMINATION IDENTIFIED DURING THE REMEDIAL INVESTIGATION. US EPA ALSO TOOK SOME INTERIM MEASURES TO CONTROL THE MIGRATION OF CONTAMINANTS OFF-SITE AND EXCAVATED AN UNDERGROUND STORAGE TANK DUE TO CONCERN THAT HAZARDOUS SUBSTANCES CONTAINED IN THE TANK MIGHT LEAK AND CONTAMINATE THE GROUNDWATER.

THE REMEDIAL INVESTIGATION CONFIRMED THE PRESENCE OF CONTAMINATION ON-SITE IN THE GROUNDWATER, SOILS, POND SEDIMENTS AND SURFACE WATER. IN ADDITION TO ON-SITE CONTAMINATION, PROPERTY OUTSIDE THE SITE PERIMETERS WAS ALSO FOUND TO BE CONTAMINATED. A VARIETY OF ORGANIC AND INORGANIC COMPOUNDS WAS DETECTED THAT COULD POTENTIALLY THREATEN HUMAN HEALTH THROUGH DIRECT CONTACT WITH SEDIMENTS AND SOILS OR INGESTION OF THE GROUNDWATER. US EPA DEVELOPED NINE ALTERNATIVES FOR CORRECTING AND CONTROLLING THE CONTAMINATION AND EVALUATED THESE ALTERNATIVES AGAINST SPECIFIC CRITERIA TO DETERMINE THE BEST SOLUTION TO THE PROBLEM. THE RECOMMENDED ALTERNATIVE WAS PRESENTED TO THE GENERAL PUBLIC IN A FACT SHEET IN FEBRUARY 1988, AND FURTHER EXPLAINED AT A PUBLIC MEETING IN DEERFIELD ON FEBRUARY 29, 1988. PUBLIC COMMENTS ON THE PROPOSED REMEDY AS WELL AS THE FEASIBILITY STUDY AND ALL THE ALTERNATIVES PRESENTED WERE ACCEPTED BY US EPA AT THE MEETING AND IN WRITING THROUGH MARCH 21, 1988 AND AT A PUBLIC MEETING. US EPA THEN CAREFULLY EVALUATED THOSE COMMENTS TO DETERMINE IF THERE WERE ISSUES OR CONCERNS THAT WOULD CAUSE A CHANGE IN THE PROPOSED REMEDIAL PLAN OF ACTION. IN JUNE 1988, US EPA REGION V ADMINISTRATOR, VALDAS ADAMKUS, SIGNED A RECORD OF DECISION SPECIFYING US EPA'S PREFERRED ALTERNATIVE AS THE REMEDY TO BE IMPLEMENTED FOR THE CONTAMINATION PROBLEMS AT THE SUMMIT NATIONAL SITE.

SUMMARY OF 1988 RECORD OF DECISION

THE OBJECTIVE OF THE 1988 ROD WAS TO REDUCE AND CONTROL THE THREATS AND RISKS TO PUBLIC HEALTH AND THE ENVIRONMENT POSED BY THE CONTAMINATED SOILS, SEDIMENTS, DEBRIS AND GROUNDWATER AT THE SITE. THE ALTERNATIVES PROPOSED TO ACCOMPLISH THIS GOAL WERE CAREFULLY EVALUATED AND CONSIDERED. THE REMEDY SELECTED INCLUDED A PLAN TO EXCAVATE AND TREAT THE HIGHLY CONTAMINATED SOILS AND ISOLATE THE SITE AREA IN ORDER TO PREVENT THE CONTAMINATION FROM MIGRATING OFF-SITE.

THE REMEDIAL ACTION SELECTED IN THE 1988 ROD CONSISTED OF THE FOLLOWING MAJOR COMPONENTS:

1. CONSTRUCTING A CHAIN-LINK FENCE AROUND THE SITE PERIMETER. SEEKING DEED RESTRICTIONS FROM PROPERTY OWNERS TO CONTROL FUTURE USE OF THE SITE.
2. EXCAVATING AND INCINERATING (IN AN ON-SITE FACILITY) THE FOLLOWING WASTES:

CONTAMINATED "HOT SPOT" SOILS	32,000 CY
CONTAMINATED OFF-SITE SEDIMENTS	1,500 CY
CONTENTS OF BURIED DRUMS	900-1600 DRUMS

3. DISMANTLING AND/OR DEMOLISHING ALL ON-SITE STRUCTURES FOR ON-SITE DISPOSAL.

4. INSTALLING A SOIL-BENTONITE SLURRY WALL AROUND THE SITE PERIMETER TO APPROXIMATELY A 40 FOOT DEPTH TO ACT AS A VERTICAL BARRIER WHICH WOULD PREVENT LATERAL MIGRATION OF CONTAMINANTS OFF-SITE.

5. COLLECTING AND TREATING SURFACE WATER FROM TWO ON-SITE PONDS AND DRAINAGE DITCHES. SEDIMENTS WOULD BE EXCAVATED AFTER PONDS AND DITCHES WERE DEWATERED.

6. EXTRACTING GROUNDWATER FOR TREATMENT FROM THE VARIOUS LEVELS BENEATH THE SITE BY TWO BASIC COMPONENTS:

A. A SYSTEM OF 220 EXTRACTION WELLS INSTALLED ON A 50-FOOT GRID SYSTEM OVER THE SITE TO REMOVE CONTAMINATED WATER FROM THE WATER TABLE UNIT (THE MOST HIGHLY CONTAMINATED LEVEL OF THE GROUNDWATER TABLE CLOSEST TO SURFACE).

B. A SYSTEM OF 12 WELLS TO EXTRACT THE WATER FROM THE INTERMEDIATE UNIT (THE LESS CONTAMINATED PORTION OF THE GROUNDWATER TABLE BENEATH THE WATER TABLE UNIT).

ALL WATER EXTRACTED WOULD BE TREATED ON-SITE, WITH TREATED WATERS TO BE DISCHARGED SOUTHEAST OF THE SITE.

7. RELOCATING ONE VACANT RESIDENCE.

8. CREATING AN ON-SITE LANDFILL, BUILT WITH AN UNDERLYING DOUBLE SYNTHETIC LINER, TO DISPOSE OF THE RESIDUE FROM INCINERATED WASTE MATERIAL.

9. REGRADING SITE AND INSTALLING A MULTI-LAYER CAP OVER ENTIRE SITE. CAP WOULD CONSIST OF A TWO-FOOT COMPACTED CLAY LAYER COVERED BY A HIGH DENSITY POLYETHYLENE LINER, SYNTHETIC DRAINAGE NET, ONE FOOT OF CLEAN EARTH FILL, AND ONE FOOT OF TOP SOIL.

10. REROUTING SOUTHERN AND EASTERN DRAINAGE DITCHES TO AN UNCONTAMINATED AREA BEYOND THE SITE.

11. THE TOTAL PRESENT WORTH COST OF THE REMEDIAL ACTION DEFINED IN THE ROD WAS \$25 MILLION.

SUMMARY OF 1990 PROPOSED REMEDIAL ACTION

THE OBJECTIVES OF THE 1990 PROPOSED REMEDIAL ACTION ARE THE SAME AS IN THE 1988 ROD: TO REDUCE AND CONTROL THE THREATS AND RISKS POSED BY SITE CONTAMINATION. THE PRIMARY GOAL, AS IN THE 1988 ROD, IS TO IMPLEMENT A SOLUTION TO A COMPLEX CONTAMINATION PROBLEM THAT IS PROTECTIVE OF HUMAN HEALTH AND THE ENVIRONMENT AND PROVIDES A LONG-TERM, AS WELL AS SHORT-TERM, SOLUTION IN KEEPING WITH OHIO EPA AND US EPA REGULATIONS. THE MAJOR DIFFERENCE BETWEEN THE 1990 PROPOSAL AND THE 1988 ROD IS THAT OF LONG-TERM CLEANING OF CONTAMINATED MEDIA VERSUS ISOLATION. WITH BOTH THE 1990 PROPOSED REMEDY AND THE 1988 ROD, THE MOST HIGHLY CONTAMINATED SOILS AND SEDIMENTS WILL BE EXCAVATED AND TREATED. THE GROUNDWATER EXTRACTION CALLED FOR BY THE 1990 PROPOSED REMEDY, HOWEVER, WILL BE ACCOMPLISHED BY A DIFFERENT TECHNOLOGY THAT WILL RESULT IN A LONG-TERM CLEANING, THUS ELIMINATING THE NEED FOR ISOLATION BY MEANS OF A SLURRY WALL AND MULTI-LAYER CAP.

FOR EASE IN COMPARISON, THE FOLLOWING LIST OF ELEMENTS IS NUMBERED IN PARALLEL TO THE LISTING UNDER THE 1988 ROD. (TABLE 1, PAGE 13, GIVES AN ABBREVIATED SIDE-BY-SIDE COMPARISON OF KEY ELEMENTS.)

1. EXPANDING SITE BOUNDARIES TO INCLUDE CONTAMINATED AREAS ALONG THE PERIMETERS AND THE SOUTH DRAINAGE DITCH AND CONSTRUCTING AN 8-FOOT CHAIN LINK FENCE AROUND THIS EXPANDED BOUNDARY.

2. EXCAVATING AND INCINERATING (IN AN ON-SITE FACILITY) SOILS AND SEDIMENTS AS FOLLOW:

CONTAMINATED SOILS ON-SITE:	24,000 CY
CONTAMINATED PERIMETER SEDIMENTS:	4,000 CY

(INCLUDING DRAINAGE DITCHES)
CONTENTS OF BURIED DRUMS

900-1600 DRUMS

3. DISMANTLING AND/OR DEMOLISHING ALL ON-SITE STRUCTURES FOR ON-SITE DISPOSAL.
4. NO SLURRY WALL WOULD BE CONSTRUCTED UNDER THIS REMEDIAL ACTION.
5. COLLECTING AND TREATING SURFACE WATER FROM TWO ON-SITE PONDS AND DRAINAGE DITCHES. SEDIMENTS WOULD BE EXCAVATED AFTER PONDS AND DITCHES ARE DEWATERED.
6. EXTRACTING GROUNDWATER FOR TREATMENT FROM THE VARIOUS LEVELS OF THE WATER TABLE ON-SITE BY TWO BASIC COMPONENTS:
 - A. A PIPE AND MEDIA DRAIN SYSTEM ALONG THE SOUTHERN BOUNDARY AND LOWER PORTIONS OF THE EASTERN AND WESTERN BOUNDARIES RATHER THAN A SYSTEM OF WELLS TO EXTRACT AND TREAT CONTAMINATED GROUNDWATER.
 - B. ADDITIONAL EXTRACTION WELLS INSTALLED IN THE INTERMEDIATE UNIT TO AUGMENT THE PIPE AND MEDIA DRAIN SYSTEM.ALL WATER EXTRACTED WILL BE TREATED BY A SYSTEM TO BE ENCLOSED IN AN ON-SITE BUILDING.
7. RELOCATING ONE VACANT RESIDENCE.
8. NO ON-SITE LANDFILL WOULD BE CREATED UNLESS THE WASTES FAIL APPROPRIATE TESTING. INSTEAD, ASH FROM INCINERATED WASTE MATERIAL WOULD BE TESTED TO ENSURE IT CONFORMS WITH US EPA AND OHIO EPA STANDARDS AND USED AS FILL TO REGRADE THE SITE BEFORE THE FINAL COVER IS PLACED OVER THE SURFACE.
9. REGRADING SITE AND INSTALLING A SOIL COVER OVER APPROXIMATELY 10.6 ACRES OF SITE. THIS COVER WILL CONSIST OF AN 18-INCH LAYER OF LOAM AND 6 INCHES OF TOPSOIL WITH GAS VENTS INSTALLED FOR TREATING AND MONITORING POTENTIAL AIR EMISSIONS.
10. REROUTING SOUTH AND EAST DRAINAGE DITCHES TO UNCONTAMINATED AREA BEYOND THE SITE.
11. THE TOTAL COST OF THE REMEDIAL ACTION IS \$34.4 MILLION.

US EPA, OHIO EPA, AND A LARGE GROUP OF POTENTIALLY RESPONSIBLE PARTIES (PRPS) HAVE SIGNED A CONSENT DECREE, WHEREBY THE PRPS HAVE AGREED TO DESIGN AND IMPLEMENT THIS AMENDMENT ROD. UNDER TERMS OF THE CONSENT DECREE, THE RESPONSIBLE PARTIES NAMED IN THE AGREEMENT WILL RETAIN THE CONTRACTORS WHO WILL DESIGN AND IMPLEMENT THE REMEDIAL ACTION. BEFORE CONSTRUCTION BEGINS, US EPA AND OHIO EPA MUST REVIEW AND APPROVE ALL DESIGN DRAWINGS AND SPECIFICATIONS, AND HEALTH AND SAFETY, QUALITY ASSURANCE, AND OPERATION AND MAINTENANCE PLANS. US EPA AND OHIO EPA WILL OVERSEE AND MONITOR ALL ACTIVITIES OF THE REMEDIAL ACTION AND ONGOING OPERATION AND MAINTENANCE TO ENSURE COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS.

EXPLANATION OF SIGNIFICANT DIFFERENCES

THE MAJOR DIFFERENCES BETWEEN THE 1988 ROD AND 1990 PROPOSED REMEDIAL ACTION ARE AS FOLLOWS:

THE SITE PERIMETER HAS BEEN EXTENDED TO INCLUDE SOME AREAS OF CONTAMINATION PREVIOUSLY CONSIDERED "OFF-SITE." THE SITE FENCING WILL BE EXPANDED TO INCLUDE THESE AREAS. CONTAMINATED SOILS WILL BE REMOVED FROM THESE AREAS FOR ON-SITE INCINERATION.

THE METHOD AND UNDERLYING RATIONALE FOR EXTRACTING AND TREATING THE GROUNDWATER HAS CHANGED SIGNIFICANTLY UNDER THE 1990 PROPOSED REMEDY.

THE 1988 ROD CALLED FOR A SERIES OF 220 EXTRACTION WELLS TO BE INSTALLED ON A GRID SYSTEM ON THE SITE TO EXTRACT CONTAMINATED GROUNDWATER. UNDER THIS METHOD, IT WAS ALSO NECESSARY TO BUILD A SLURRY WALL TO ISOLATE THE SITE AND PROHIBIT CLEAN GROUNDWATER FROM MIGRATING UNDER THE SITE AND CONTAMINATED GROUNDWATER FROM MIGRATING OFF-SITE. THE SLURRY WALL AFFORDED THE PROTECTION NEEDED TO REDUCE OR ELIMINATE OFF-SITE RISKS BY

ISOLATING THE CONTAMINANTS IN PLACE.

THE NEW PROPOSAL CALLS FOR A SYSTEM THAT UTILIZES PIPES AND DRAINS TO COLLECT GROUNDWATER OVER AN EXTENDED PERIOD OF TIME IN PLACE OF THE EXTRACTION WELLS. UNDER THIS SYSTEM, THE WATER THAT CONTINUES TO SLOWLY INFILTRATE SITE SOILS AND SEDIMENTS, DISSOLVING CONTAMINANTS FROM SOIL PARTICLES DURING THIS PROCESS, WILL CONTINUALLY DRAIN AND BE COLLECTED FOR TREATMENT. BECAUSE THE PIPE AND DRAIN SYSTEM COLLECTS FROM THE SOUTHERN AND LOWER EAST AND WEST PERIMETERS, WHICH IS THE NATURAL COURSE OF THE GROUNDWATER FLOW, CONTAMINATED WATER WILL BE COLLECTED AND TREATED AND WILL NOT MIGRATE OFF-SITE, THUS ELIMINATING THE NEED FOR THE SLURRY WALL AS A PART OF THE REMEDY.

UNDER THE 1990 PROPOSAL, CONTAMINATED SOILS WILL BE EXCAVATED TO DEPTHS OF TWO FEET BELOW THE SURFACE, WHEREAS IN THE 1988 ROD, SOME AREAS WERE TO BE EXCAVATED TO DEPTHS OF 0-8 FEET BELOW THE SURFACE. THIS DIFFERENCE WAS PROPOSED BASICALLY DUE TO THE CHANGE IN THE GROUNDWATER EXTRACTION METHOD. THE TOP TWO FEET OF SURFACE SOILS ARE GENERALLY THE MOST HIGHLY CONTAMINATED AND POSE THE GREATEST THREAT TO PUBLIC HEALTH BY CONTACT AND INGESTION. THESE WILL BE EXCAVATED AND TREATED. THE LOWER LEVELS OF CONTAMINATION REMAINING IN SOILS BELOW 2 FEET WILL BE FLUSHED BY RAIN AND SNOWFALL INFILTRATING THE SITE COVER. THESE CONTAMINANTS WILL THEN BE EXTRACTED WITH THE GROUNDWATER AND TREATED. IN THE AREAS WHERE BURIED DRUMS WILL BE EXCAVATED, SOILS WILL BE EXCAVATED TO GREATER DEPTHS AS NECESSARY.

THE ON-SITE LANDFILL MAY NOT BE NECESSARY UNDER THE 1990 PROPOSED REMEDY. THE RESULTING ASH FROM INCINERATING THE CONTAMINATED SOILS AND SEDIMENTS WILL BE TESTED TO ENSURE THAT IT MEETS ESTABLISHED STANDARDS AND THEN USED AS BACKFILL TO REGRADE THE SITE BEFORE PLACING THE FINAL SITE COVER. THE SELECTED REMEDY ASSUMES THAT THE CHARACTERIZATION OF THE ASH WILL ALLOW THE STATE OF OHIO TO WAIVE THEIR SOLID WASTE REGULATION REGARDING THE FINAL DEPOSITION OF THE ASH. THE STATE OF OHIO HAS AGREED TO CONSIDER SUCH A WAIVER WHEN THE ANALYSIS OF THE ASH IS AVAILABLE. IF THE ASH DOES NOT MEET THE REQUIREMENTS, IT WILL BE RETREATED BY THE INCINERATION PROCESS UNTIL IT ACHIEVES ACCEPTABLE LEVELS FOR ORGANIC CONTAMINANTS. IF THE ASH DOES NOT MEET THE US EPA LANDBAN REQUIREMENTS BECAUSE OF INORGANIC CONTAMINANTS IT WILL NEED TO BE PLACED IN A RCRA ON-SITE FACILITY.

THE 1988 ROD CALLED FOR AN IMPERMEABLE CAP OVER THE SITE TO PREVENT INFILTRATION AND ISOLATE THE CONTAMINATION ON-SITE. THE 1990 PROPOSAL IMPLEMENTS A SITE COVER THAT WILL ALLOW INFILTRATION. THIS CONTROLLED INFILTRATION WILL SUPPLEMENT THE REMOVAL OF CONTAMINANTS BY THE ONGOING GROUNDWATER COLLECTION AND TREATMENT CYCLE.

COMPARATIVE ANALYSIS OF ALTERNATIVES

THE 1988 ROD SCREENED ALTERNATIVES BASED ON THEIR ABILITY TO PROTECT HUMAN HEALTH AND THE ENVIRONMENT; ACHIEVE STATE AND FEDERAL ARARS (APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS); REDUCTION IN TOXICITY, MOBILITY, AND VOLUME; COST EFFECTIVENESS; STATE AND COMMUNITY ACCEPTANCE. THE 1990 PROPOSED REMEDY WAS ALSO SCREENED USING THE SAME CRITERIA.

OVERALL PROTECTION OF HUMAN HEALTH AND THE ENVIRONMENT

THE 1990 PROPOSED REMEDY AND THE 1988 REMEDY WOULD PROVIDE PROTECTION FOR HUMAN HEALTH AND THE ENVIRONMENT. BOTH REMEDIES ELIMINATE THE EXPOSURE ROUTES TO ANY RESIDUAL CONTAMINATION WHICH WOULD RESULT IN ELIMINATING ANY RESIDUAL RISKS ASSOCIATED WITH THE SITE.

COMPLIANCE WITH APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS

THE 1990 PROPOSED REMEDY AND THE 1988 REMEDY WOULD COMPLY WITH ALL APPLICABLE OR RELEVANT AND APPROPRIATE FEDERAL, AND STATE LAWS. THE ARARS ARE LISTED IN THE 1988 ROD. THE ONLY ADDITIONAL ARAR IS THE LANDBAN REQUIREMENTS OF RCRA, WHICH WILL APPLY AND WILL BE MET.

LONG-TERM EFFECTIVENESS AND PERMANENCE

THE 1990 PROPOSED REMEDY WOULD ACHIEVE A HIGHER DEGREE OF PERMANENCE AND LONG-TERM EFFECTIVENESS THAN THE 1988 REMEDY. INCINERATION OF SOILS WOULD DESTROY VIRTUALLY ALL ORGANIC CONTAMINATION. THE RESIDUAL SOIL

WILL BE TESTED FOR INORGANIC CONTAMINATION AND WILL BE PLACED IN A RCRA LANDFILL ON-SITE, IF NECESSARY. THE SOILS WHICH REMAIN WOULD BE FLUSHED BY RAINWATER AND ALL OF THE GROUNDWATER WOULD BE COLLECTED BY THE INTERCEPTOR TRENCHES AND EXTRACTION WELLS. THE WATER EXTRACTED WOULD BE TREATED BY AN ON-SITE TREATMENT PLANT TO REQUIRED CONTAMINANT LEVELS BEFORE BEING RELEASED TO SURFACE WATERS. THIS SYSTEM WILL BE IN PLACE AS LONG AS REQUIRED TO EFFECT A CLEANUP OF THE GROUNDWATER TO ACCEPTABLE LEVELS. THE 1988 REMEDY REQUIRED ISOLATION, RATHER THAN TREATMENT, OF CONTAMINATED SOILS THAT WERE NOT INCINERATED, MAKING THE REMEDY LESS PERMANENT AND LESS EFFECTIVE IN THE LONG TERM. REDUCTION OF TOXICITY, MOBILITY OR VOLUME

THE 1990 PROPOSED REMEDY WOULD SATISFY THE STATUTORY PREFERENCE FOR TREATMENT AS A PRINCIPAL ELEMENT. BOTH THE INCINERATION OF THE SOILS AND THE GROUNDWATER COLLECTION AND TREATMENT SYSTEMS WOULD PROVIDE A LARGE REDUCTION IN THE TOXICITY AND MOBILITY OF THE CONTAMINATED SOIL AND GROUNDWATER. THE 1988 REMEDY WOULD NOT ACHIEVE AS GREAT A REDUCTION IN THE TOXICITY, MOBILITY, OR VOLUME OF CONTAMINATION BECAUSE IT CALLED FOR ISOLATION, RATHER THAN TREATMENT, OF CONTAMINATED SOILS THAT WERE NOT INCINERATED.

SHORT-TERM EFFECTIVENESS

BOTH THE PROPOSED REMEDY AND THE 1988 REMEDY COULD RESULT IN SHORT-TERM EFFECTS DURING EXCAVATION, MATERIALS HANDLING, INCINERATION AND GROUNDWATER TREATMENT. WITH ON AND OFF SITE MONITORING OF AIR EMISSIONS AND AN EFFECTIVE SAFETY PLAN FOR SITE WORK, NO ADVERSE IMPACTS TO WORKERS, THE COMMUNITY OR THE ENVIRONMENT WILL OCCUR.

IMPLEMENTABILITY

THIS PROPOSED REMEDY UTILIZES PROVEN TECHNOLOGIES FOR EXTRACTION AND TREATMENT OF SOIL AND GROUNDWATER. EQUIPMENT AND EXPERTISE TO IMPLEMENT THESE PROCESSES ARE READILY AVAILABLE. IT IS IN THIS AREA THAT THE PROPOSED REMEDY IS SUBSTANTIALLY BETTER THAN THE 1988 REMEDY. WHILE THE TECHNOLOGIES CHOSEN IN THE 1988 ROD ARE PROVEN TECHNOLOGIES, THEY ARE NOT COMMONLY EMPLOYED IN THE COMBINATION REQUIRED BY THE ROD. SPECIFICALLY THE INSTALLATION OF AN IMPERMEABLE CAP WOULD NOT USUALLY BE COMBINED WITH THE INSTALLATION OF NUMEROUS EXTRACTION WELLS THROUGH THIS CAP. THE PROPOSED REMEDY WOULD AVOID THE POTENTIAL PROBLEMS CAUSED BY THIS COMBINATION OF TECHNOLOGIES WHICH COULD LIMIT THE EFFECTIVENESS OF THE REMEDY.

COST

THE COST OF THE 1990 PROPOSED REMEDY IS \$34.4 MILLION. THE COST OF THE 1988 REMEDY IS \$25 MILLION. THESE COSTS WERE ESTIMATED BY DIFFERENT CONTRACTORS USING DIFFERENT CRITERIA FOR CONTINGENCIES. ACTUAL COST ARE EXPECTED TO BE ABOUT EQUIVALENT.

STATE ACCEPTANCE

THE STATE OF OHIO HAS INDICATED THAT THEY CONCUR WITH THE 1990 PROPOSED REMEDY AND CONSENT DECREE AND THEY ARE A SIGNATORY TO THE CONSENT DECREE. A COPY OF THE STATE'S CONCURRENCE LETTER IS ATTACHED.

COMMUNITY ACCEPTANCE

US EPA ACCEPTED PUBLIC COMMENTS ON THE PROPOSED ROD AMENDMENT DURING THE COMMENT PERIOD WHICH OCCURRED BETWEEN JULY 16, 1990 AND AUGUST 17, 1990 AND AT THE PUBLIC MEETING ON AUGUST 1, 1990. FOLLOWING THE COMMENT PERIOD, A RESPONSIVENESS SUMMARY WAS PREPARED WHICH ADDRESSED THE COMMENTS RECEIVED. THE RESPONSIVENESS SUMMARY IS ATTACHED. IN GENERAL, THE PUBLIC INDICATED THAT THEY CONCURRED WITH THE PROPOSED REMEDY. SEVERAL PEOPLE DID EXPRESS THEIR CONCERN ABOUT THE INCINERATION AT THE SITE. AS EXPLAINED IN THE RESPONSIVENESS SUMMARY, BY UTILIZING A STATE-OF-THE-ART INCINERATOR AND WITH CAREFUL MONITORING OF THE INCINERATOR AND OFF-SITE MONITORING, INCINERATION SHOULD NOT POSE A PROBLEM FOR THE COMMUNITY.

STATUTORY DETERMINATIONS

THIS REMEDY WILL BE PROTECTIVE OF HUMAN HEALTH AND THE ENVIRONMENT. IT WILL GREATLY REDUCE THE VOLUME, TOXICITY, AND MOBILITY OF HAZARDOUS SUBSTANCES THROUGH INCINERATION AND TREATMENT OF GROUNDWATER. THE SITE WILL BE CAPPED TO PREVENT ANY DIRECT CONTACT WITH THE MATERIALS LEFT ON SITE.

THIS REMEDY WILL ATTAIN ALL FEDERAL, STATE AND LOCAL ARARS. THE ARARS WERE LISTED IN THE 1988 ROD. THE ONLY ADDITIONAL ARAR IS THE LANDBAN REQUIREMENTS OF RCRA WHICH WILL BE MET.

THE REMEDY IS COST-EFFECTIVE AND WILL BE IMPLEMENTED BY THE PRPS UNDER A CONSENT DECREE.

THE REMEDY ALSO USES PERMANENT SOLUTIONS AND ALTERNATIVE TREATMENT TECHNOLOGIES TO THE MAXIMUM EXTENT PRACTICABLE. THE PROPOSED REMEDY UTILIZES PERMANENT SOLUTIONS TO GREATER DEGREE THAN THE 1988 ROD THROUGH THE USE OF A GROUNDWATER COLLECTION AND TREATMENT SYSTEM INSTEAD OF ISOLATING THESE CONTAMINANTS.

#TA

TABLE ONE

SUMMIT NATIONAL, OHIO

ORIGINAL ROD (SIGNED)	REVISED ROD
ACCESS/DEED RESTRICTIONS	SAME
RAZING ON-SITE STRUCTURES AND DISPOSAL	SAME
REMOVAL AND INCINERATION OF DRUM AND TANK CONTENTS	SAME
ELIMINATE ON-SITE SURFACE WATERS	SAME
REGRADE THE SITE	SAME
WATER TREATMENT PLANT TO TREAT GROUNDWATER AND PONDED SURFACE WATER	SAME
CHARACTERIZED AND CLOSE THE TIPPLE WELL	SAME
LONG TERM OPERATION AND MAINTENANCE FOR REMEDIAL ACTIONS	SAME
REMEDIATION OF OFF-SITE SEDIMENTS	SAME
RELOCATE RESIDENCE	SAME
REMEDIATION OF OFF-SITE SOILS BY COVER	REMEDIATION BY INCINERATION
REMEDIATION OF ON-SITE SOILS 32,000 C.Y.	REMEDIATION OF 24,000 C.Y.
DISPOSAL OF INCINERATION ASH IN ON-SITE RCRA LANDFILL	DISPOSAL AS FILL ON-SITE IF NON-HAZARDOUS WASTE. IF HAZARDOUS WASTE IN ON-SITE RCRA LANDFILL.
IMPERMEABLE COVER	PERMEABLE COVER
INSTALL EXTRACTION WELLS	INSTALL COLLECTION TRENCH IN UPPER AQUIFER AND EXTRACTION WELLS IN LOWER AQUIFER.
INSTALL SLURRY WALL	NO SLURRY WALL.
EXTEND SITE BOUNDARIES	EXTEND SITE BOUNDARIES AND REMOVE CONTAMINATED SOIL FOR ON-SITE TREATMENT.